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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/527,529	03/16/2000	Hironori Kikkawa	69605/99	2200

21254 7590 07/05/2006

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EXAMINER

NGUYEN, DUNG T

ART UNIT PAPER NUMBER

2871

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/527,529

Applicant(s)

KIKKAWA ET AL.

Examiner

Dung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/05/2005 has been entered.
2. Applicant's amendment dated 01/18/2006 has been received and entered. Claims 1-6 and 10-12 are remain pending in the application. Claims 7-9 stand withdrawn from consideration.
3. Applicant's arguments with respect to claims 1 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1, 3-6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raynes et al., US Patent No. 5,541,753, in view of Aoki et al., US Patent No. 6,115,014.

Regarding the above claims, Raynes et al. disclose a liquid crystal display (LCD) device (figure 6) comprising:

- . a pair of substrates (6, 7);
- . a liquid crystal layer (12), wherein liquid crystal molecules oriented to bend alignment;
- . a phase compensation plate (30, 31) provided outside of each of the substrates;

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. a retardation of a light passing through the liquid crystal layer and all phase compensation plates being limited to a value $\lambda/2$ or $\lambda/4$ (when $M=1$) and λ is a wavelength of visible light (claim 10);

. a circuit (3).

Although Raynes et al. do not explicitly disclose a retardation value of a minimum wavelength of the light relating to display (i.e., blue color range of 380nm to 488nm), Raynes et al. do disclose that the retardation value of visible wavelength (i.e., range of 400nm to 700nm). Thus, such disclosed range in Raynes et al. makes possible the claimed range of 380nm to 488nm, and such overlapping ranges are at least obvious. *In re Malagari*, 499 Fed.2d 1297, 182 USPQ 549 CCPA 1974.

Raynes et al. do not explicitly disclose voltages being equalized for all colors in display. Aoki et al. do disclose that an LCD display can be applying a same voltage to a plurality of frames (e.g. color pixels) in accordance with a display color designated (see claim 2). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify the Raynes et al display device in view of the Aoki et al. in order to provide an LCD apparatus capable of displaying multiple colors with low consumed power (see col. 1, ln 52).

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raynes et al., US Patent No. 5,541,753 , in view of Applicant's submitted prior art, Kuo et al., SID 94 Digest, Volume XXV, page 927-930.

Regarding claim 2, Raynes et al. disclose the claimed invention as described above except for a birefringent index of the liquid crystal molecules is equal to or less than 0.16.

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However, Kuo et al. do disclose liquid crystal molecules having a birefringent index which is less than 0.16 (see table 2) can be used in an LCD device. Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify the Raynes et al. liquid crystal molecules having a birefringent index which is less than 0.16 as shown by Kuo et al. in order to reduce a retardation value of a liquid crystal layer, so as to reduce light leakage in the large viewing angle of an LCD device(see page 929, left column, line 11).

Conclusion

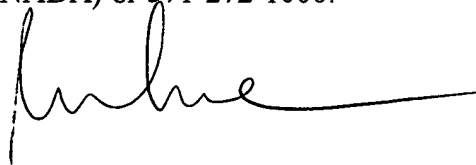
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN
06/27/2006

A handwritten signature in black ink, appearing to read 'Dung Nguyen', with a long horizontal line extending to the right.

Dung Nguyen
Primary Examiner
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